

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Mikhail Vladimirovich KUTUSHOV

Serial No.: 10/576,039

Filing Date: 14 April 2006

Title: SYSTEM FOR CORRECTING
BIOLOGICAL FLUID

Customer No.: 42419

Group No.: 3761

Examiner:
Leslie R. Deak

DECLARATION UNDER 37 CFR 1.132

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

I, the inventor of this Patent Application and signing below, hereby declare the following in support of my application for Letters Patent in the United States of America:

1. I am the named inventor on U.S. Patent 5,980,479 (the '479 Patent), which has been applied by the Examiner in rejecting this Patent Application under 35 U.S.C. §103.

I hereby certify that this paper is being electronically transmitted to the U.S. Patent and Trademark Office on the date shown below.

Mark Swanson

Type or print name of person signing certification

10/22/08
Date

[Signature]

Signature

2. The invention of this Patent Application provides several unexpected benefits over the device of the '479 Patent. Several of these benefits, as best understood at the present time and without wishing to be bound by theory, are explained below.

3. The mixing of magnetic particles and biological liquids according to the structure of the claimed invention of this Patent Application is more efficient and less traumatic for the biological liquids, and especially for blood, than the device of the '479 Patent.

4. In the device according to the '479 Patent, the flow of biological liquid and magnetic suspension is generally constant, and the contact time between particles and toxins generally does not allow the whole active surface of the paramagnetic particles to react with the toxins. According to the claimed invention of this Patent Application, the flows of magnetic liquid and biological liquid make periodic stops due to the actions of the bellows-like pumping action. Such periodic stops of the biological liquid containing the magnetic particles promote the efficient collection of toxins.

5. The flow within the structure of the claimed invention of this Patent Application further results in the paramagnetic particles generally having advantageous spatial positions within the separator during the periodic flow stop. According to the claimed invention, the particles having the favorable situation with respect to the liquid flow continue to collect toxins, resulting in a larger

amount of the sorption surface being filled up and a better distribution within the separator. This is an unexpected improvement over the structure of the '479 Patent, in which the separator is filled chaotically with the densest fill at the separator's inlet. This can result in the flow being blocked by large aggregates, which makes the biological liquid flow to stop, thereby threatening vascular embolism and loss of life.

I further declare that all statements made herein of my knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.



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